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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/602,177	06/24/2003	Pawan Kumar Agarwal	99B049D	9452

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EXXONMOBIL CHEMICAL COMPANY
5200 BAYWAY DRIVE
P.O. BOX 2149
BAYTOWN, TX 77522-2149

EXAMINER

LU, C CAIXIA

ART UNIT	PAPER NUMBER
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1713

DATE MAILED: 02/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/602,177	AGARWAL ET AL.	
	Examiner	Art Unit	
	Caixia Lu	1713	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-23,26,28-32,34 and 35 is/are allowed.
- 6) ☒ Claim(s) 24,33 and 36 is/are rejected.
- 7) ☒ Claim(s) 25 and 27 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 June 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|-----------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>12/24/03</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities:

(i) In the first paragraph of the specification, the status of the parent applications as being abandoned is not updated.

(ii) In the Preliminary Amendment filed Dec. 19, (a) page 2, line 6, the amendment should start at "page 4, line 26" rather than the indicated "page 4, line 20", and (b) page 3, the 5th paragraph, a space should be inserted between "a" and "50/50".

(iii) On page 4, line 21-22, the phrase "polymer formed in" should be deleted in order to match the description of "Comparative Example 12" of page 25.

(iv) Page 26, lines 25-26, the disclosure of the copolymer "had a melting point of 168.7 °C" seems erroneous because it is unlikely to have a melting temperature for a propylene copolymer to have such a high melting temperature. In general, the isotactic propylene homopolymers might have melting temperature as high as 168°C, and the copolymer of propylene are expected to have melting temperature lower than 168.7°C.

(v) In the Drawings, (a) in Fig. 10, the term "blnd" should be replaced with --blend--, and (b) in Fig. 18, the phase "Example 2" should be replaced with --comparative example 12--.

2. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: proper support for the copolymer melting temperature minus the crystallization temperature of "25-39 °C" must be provided in the Specification.

Claim Objections

3. Claim 27 is objected to because of the following informalities: in line 7, the term "or" is missing in the front of "1,13-tetradecadiene". Appropriate correction is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

5. Claim 24, 33 and 36 are rejected under 35 U.S.C. 102(a) as being anticipated by Ushioda et al. (WO99/11680).

Ushioda's Comparative Example 1 of page 18 teaches a copolymer of propylene and 1,9-diene with the melting temperature minus the crystallization temperature of $144.2^{\circ}\text{C} - 106.7^{\circ}\text{C} = 37.5^{\circ}\text{C}$. Ushioda's teaching encompasses the instant claim.

Allowable Subject Matter

6. Claims 1-23, 26, 28-32, 34 and 35 are allowed.
7. Claims 25 and 27 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The instant claims share the same novelty scope as the claims of parent application 09/788,811 which was issued allowance by the examiner for the following reasons:

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--Ushioda et al. (WO 99/11680), Meka et al. (US 5,670,595) or Etherton et al. (US 5,504,171) teaches α -olefins/ α,ω -diene copolymers by polymerizing one or more α -olefins and an α,ω -diene in the presence of a metallocene catalyst which can produce highly isotactic polypropylene copolymer. However, the cited prior arts do not teach the α -olefins/ α,ω -diene copolymers to have two crystalline populations in the ranges 152 to 158°C and 142-148°C or a crystallization temperature of 118-135 °C of instant claims 2-8, 11-15 and 18-24 or the copolymer melting temperature minus the crystallization temperature of 25-39 °C. While Ushioda's Examples 1 and 2 teach a propylene/1,9-decadiene having a crystallization temperature of about 115 °C, Ushioda does not teach or reasonably suggest a propylene copolymer of propylene, a diene and an olefin other than propylene to have a crystallization temperature of about 115 °C of the instant claims 26-27. As a matter of fact, a skilled artisan would have expect the crystallization temperature of the propylene copolymer to drop when an olefin other than propylene is introduced to the copolymer. Furthermore, since applicants have shown in the comparatives examples that those specified melting and crystallization temperatures are not inherent in the copolymers even though the copolymers are prepared by similar metallocene catalysts, thus, the melting temperatures limitation of the instant claimed copolymer are not inherent or obvious over the cited prior arts. The instant claims are deemed to be novel.--

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Caixia Lu whose telephone number is (571) 272-1106. The examiner can normally be reached from 9:00 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful and the matter is urgent, the examiner's supervisor, David Wu, can be reached at (571) 272-1114. The fax numbers for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-1700.

A handwritten signature in black ink, appearing to read 'Caixia Lu'.

Caixia Lu, Ph. D.
Primary Examiner
February 5, 2005